

COMPUTING THE EULER NUMBER OF A BINARY IMAGE

Abstract of the Disclosure

An Euler number representation of a binary image is calculated. The binary image is considered as a series of partial images. The Euler number for
5 each partial image is calculated using properties of runs of zeros and ones in the pixel matrix, and the results are combined together. The operations may be performed sequentially or in parallel. The calculations may be performed using discrete logic components for on-chip VLSI implementations.